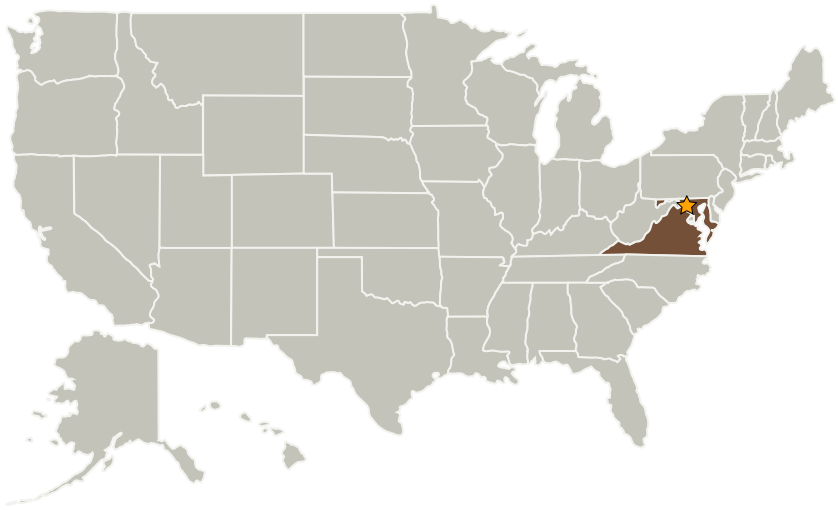
Space-Qualified Ultrastable Laser Source, Phase I

Completed Technology Project (2006 - 2006)

Project Introduction

We propose the development and space-qualification of a 1.06 micron ultrastable fiber laser source that fully satisfies the requirements of this SBIR opportunity (Laser Technologies for Gravitational Wave Detection). Our recommended approach builds on extensive experience developing and using single-frequency laser sources in the near infrared, both for aerospace and commercial applications. Our technical approach is based on emerging technology, spawned by the telecom industry that is only now reaching the maturity level where space qualification can be undertaken. NASA requires ultrastable laser sources for a variety of ongoing and planned missions including LISA and GRACE.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Metis Technology Solutions, Inc.	Supporting Organization	Industry Women-Owned Small Business (WOSB)	Albuquerque, New Mexico

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Maryland	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers